Explore Weather Trends

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Extract Data

Using SQL queries to extract data from the temperatures database:

- Riyadh city
  ```
  Select year,avg_temp
  From city_data
  Where city='Riyadh'
  ```

- Global
  ```
  Select *
  From global_data
  ```

Calculate the Moving Average

Tool used: Microsoft Excel

Using the AVERAGE Formula to calculate the average of every century (10 years)

Global Avg Temp	Global Moving Average
7.9	
8.18	
8.1	
8.04	
8.21	
8.11	
8	
7.76	
8.1	
8.25	=AVERAGE(E2:E11)

FIGURE 1 CALCULATING THE AVERAGE

Create a Line Chart

Tool used: Microsoft Excel

Using the Line Chart feature to clear data visualization of the temperatures.

- X-axis: years
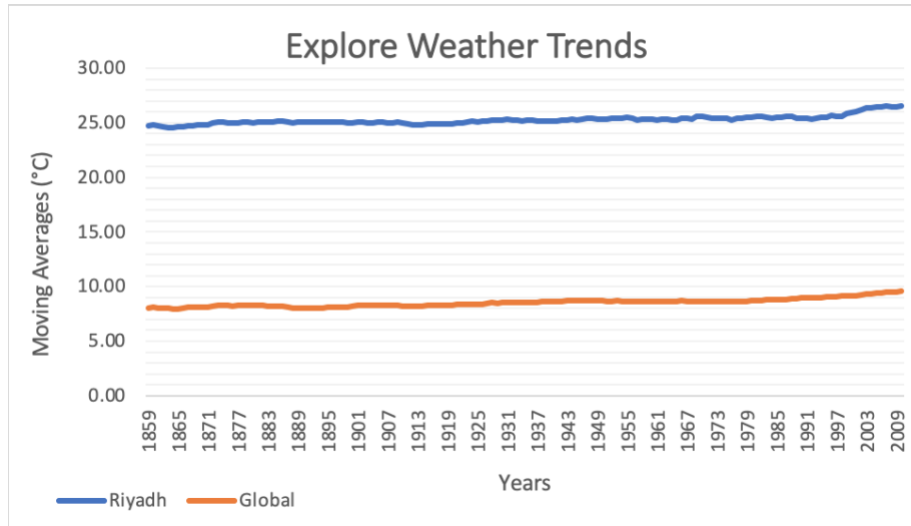- Y-axis: Moving averages in Celsius (°C)

FIGURE 2 LINE CHART

Observations

- Riyadh city's moving average showed that it's hotter than the moving average of global temperatures.
- The difference between Riyadh city and the global has been consistent over time.
- The global temperature ranged from 8 to 10 °C. On the other hand, in Riyadh city, the temperature ranges from 25 to 27 °C.
- Global temperatures are slowly rising over time.

Key Consideration

I have chosen the moving average to be 10 because the century is more common to use when we have many years.